

CLAIMS

We claim:

- 1 1. A method comprising:
2 creating a scaled-down representation of input to a compute-intensive
3 application;
4 calculating a computing requirement based on the scaled-down
5 representation;
6 calculating a turn-around time and an actual cost to a customer to run the
7 compute-intensive application with the input, on one or more processors, based
8 on the calculated computing requirement; and
9 sending the turn-around time and the actual cost to the customer's client
10 software.
- 1 2. The method of claim 1 wherein the compute-intensive application
2 is to perform computer graphics rendering.
- 1 3. The method of claim 1 wherein the compute-intensive application
2 is to perform logic simulation.
- 1 4. The method of claim 1 wherein the scaled-down representation of
2 the application input is generic to a class of applications.
- 1 5. The method of claim 1 wherein the scaled-down representation of
2 the application input includes the geometry, lights, number of triangles, textures,
3 shading method, camera, ray-tracing, anti-aliasing, and motion-blur of an
4 underlying scene.
- 1 6. The method of claim 1 further wherein the turn-around time and
2 actual cost are transmitted over an internet to the customer's client software.
- 1 7. The method of claim 1 wherein the cost is in terms of input units.

1 8. The method of claim 7 wherein the input units are logic gates.

1 9. The method of claim 7 wherein the input units are image frames.

1 10. A system comprising:
2 an application-specific module to model input data;
3 a heuristic modeler module coupled to the output of the application-
4 specific module, to calculate a computing requirement; and
5 a run-time calculator module coupled to the output of the heuristic
6 modeler module, to compute a turn-around time and an actual cost to run the
7 application on one or more processors.

1 11. The system of claim 10 wherein the modules are to communicate
2 with each other over an internet.

1 12. The system of claim 10 wherein the application-specific module is
2 to generate a scaled-down representation of the data to include the geometry,
3 lights, number of triangles, textures, shading method, camera, ray-tracing, anti-
4 aliasing, and motion-blur of an underlying scene.

1 13. An article of manufacture comprising:
2 a machine readable medium containing instructions which, when
3 executed by a processor, cause a machine to perform operations comprising:
4 calculating a computing requirement based on a scaled-down
5 representation of input to a compute-intensive application, the representation
6 having been created at a customer's machine;
7 calculating a turn-around time and an actual cost to the customer to run
8 the compute-intensive application with the input, on one or more processors,
9 based on the calculated computing requirement; and
10 providing the turn-around time and the actual cost to the customer's client
11 software.

1 14. The article of manufacture of claim 13 wherein the medium
2 includes further instructions to create the scaled-down representation of the
3 application input as being generic to a class of applications.

1 15. The article of manufacture of claim 13 wherein the medium
2 includes further instructions to create the scaled-down representation of the
3 application input as having the geometry, lights, number of triangles, textures,
4 shading method, camera, ray-tracing, anti-aliasing, and motion-blur of an
5 underlying scene.

1 16. The article of manufacture of claim 13 wherein the medium
2 includes further instructions to enable the scaled-down representation of the
3 input to be received over an internet from the client software.

1 17. The article of manufacture of claim 13 wherein the medium
2 includes further instructions to enable the turn-around time and actual cost to be
3 transmitted over the internet to the customer's client software.

1 18. The article of manufacture of claim 13 wherein the medium
2 includes further instructions to calculate the cost in terms of input units.

1 19. The article of manufacture of claim 18 wherein the medium
2 includes further instructions to calculate the cost in terms of input units being
3 logic gates.

1 20. The article of manufacture of claim 18 wherein the medium
2 includes further instructions to calculate the cost in terms of input units being
3 image frames.